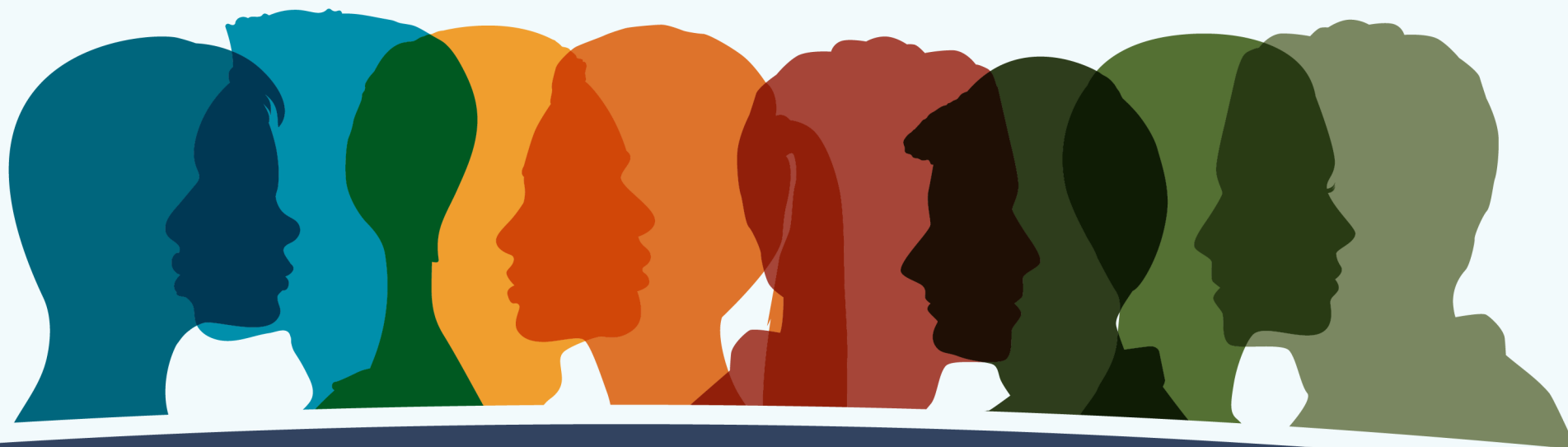


#SWDSS



NIH Scientific Workforce Diversity Seminar Series

# Science of Effective Mentorship: What's Cultural Diversity Got To Do With It?

Angela Byars-Winston, PhD, University of Wisconsin-Madison

June 14, 2023

# The Science of Effective Mentorship in STEMM



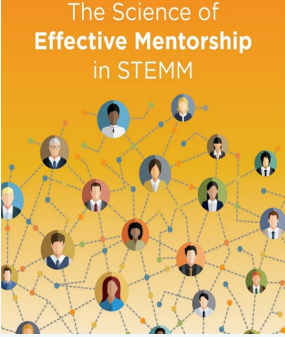
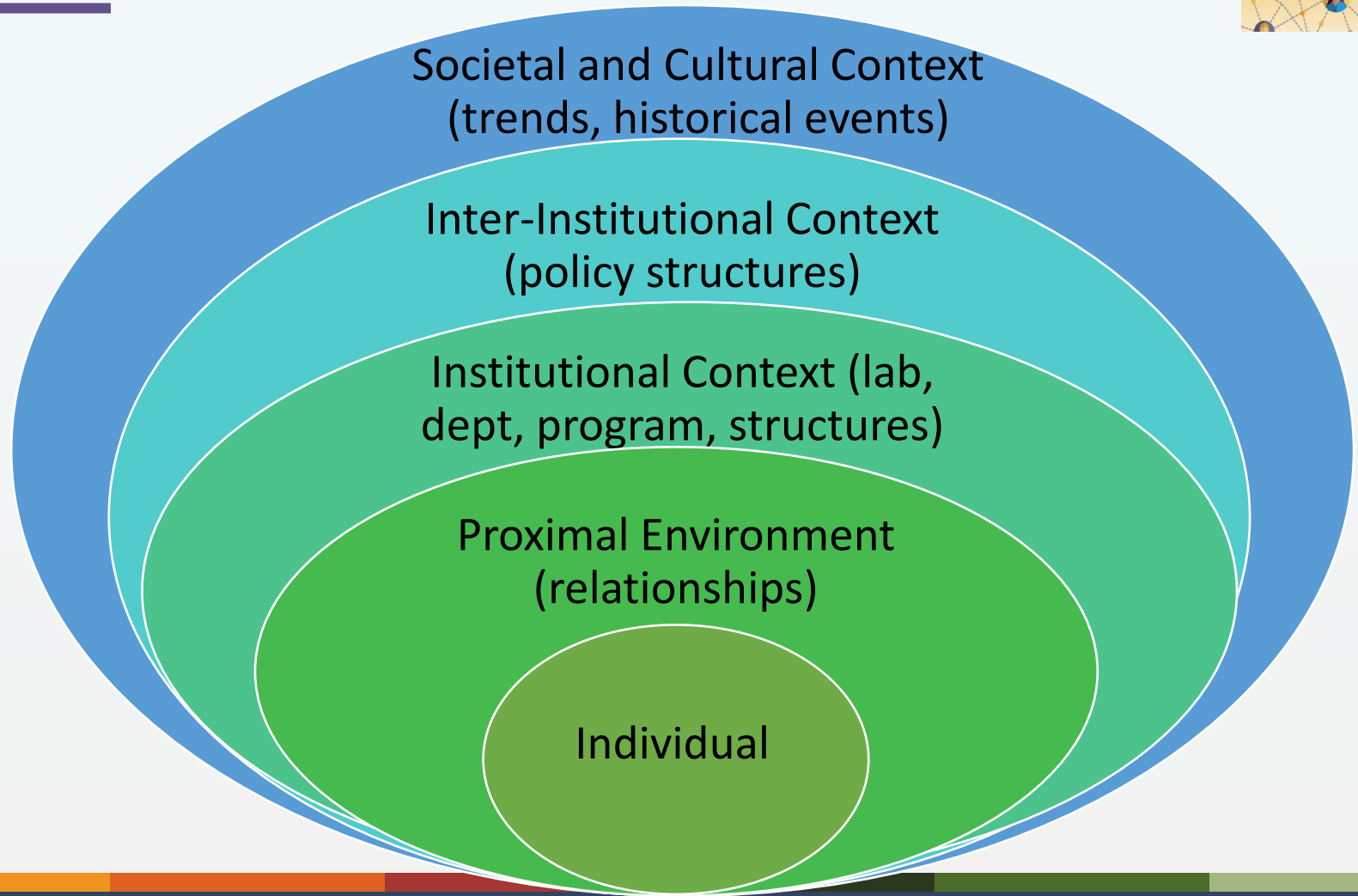
[nas.edu/mentoring](https://nas.edu/mentoring)

## What Is Mentorship?

*Mentorship is a professional, working alliance in which individuals work together over time to support the personal and professional growth, development, and success of the relational partners through the provision of **career** and **psychosocial** support (NASEM, 2019).*

# NASEM Study I: Mentorship Ecosystem

*Includes: individual, programmatic, institutional, and disciplinary society levels of support and resources for research trainees. (NASEM, 2019)*



# NASEM Study II: Mentorship is a Learned Skill



**... mentor and mentee educational curricula developed and tested...**

**... with standardized competencies and validated assessments**

**... and adapted for different disciplines (astronomy to psychology)**

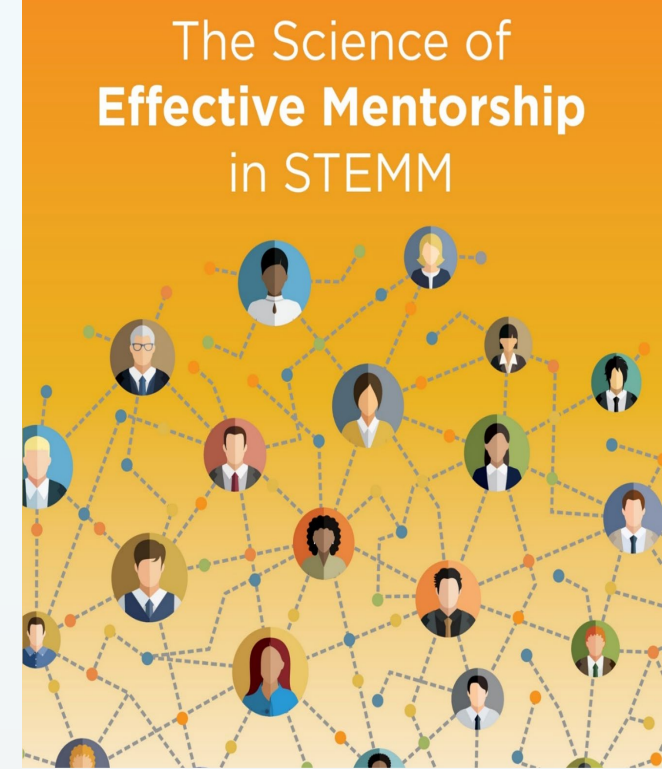
**... and different career stages**

# NASEM Study III: Recognizing, responding to cultural identities contributes to mentoring effectiveness

**Culturally responsive mentoring** is a learned skill set in which mentors, regardless of their race or gender, show interest in and value mentees' cultural backgrounds and social identities.

Positively correlated with:

- Satisfaction with mentoring relationship, commitment to a research career (Fresquez & Haeger, 2016)
- Pursuit of graduate education, research career entry (Zorec, 2022)



# Diversity Disconnect: Increase Diversity in Science Without Addressing Diversity Issues in Science



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**Without inclusion, diversity initiatives may not be enough**

Chandler Puritty<sup>1,\*</sup>, Lynette R. Strickland<sup>2,\*</sup>, Eanas Alia<sup>3</sup>, Benjamin Blonder<sup>4</sup>, Emily Klein<sup>5</sup>, Michel T. Kohl<sup>6</sup>, Earyn McGee

+ See all authors and affiliations

Science 15 Sep 2017:  
Vol. 357, Issue 6356, pp. 1101-1102  
DOI: 10.1126/science.aai9054





# What Does Research Say?



[diversity.nih.gov](https://diversity.nih.gov)



[@NIH COSWD](https://twitter.com/NIH_COSWD)



[@NIH Chief Officer for Scientific Workforce Diversity](https://www.linkedin.com/company/nihcw/)



**National Institutes of Health**

*Office of the Director*

*Chief Officer for Scientific Workforce Diversity*

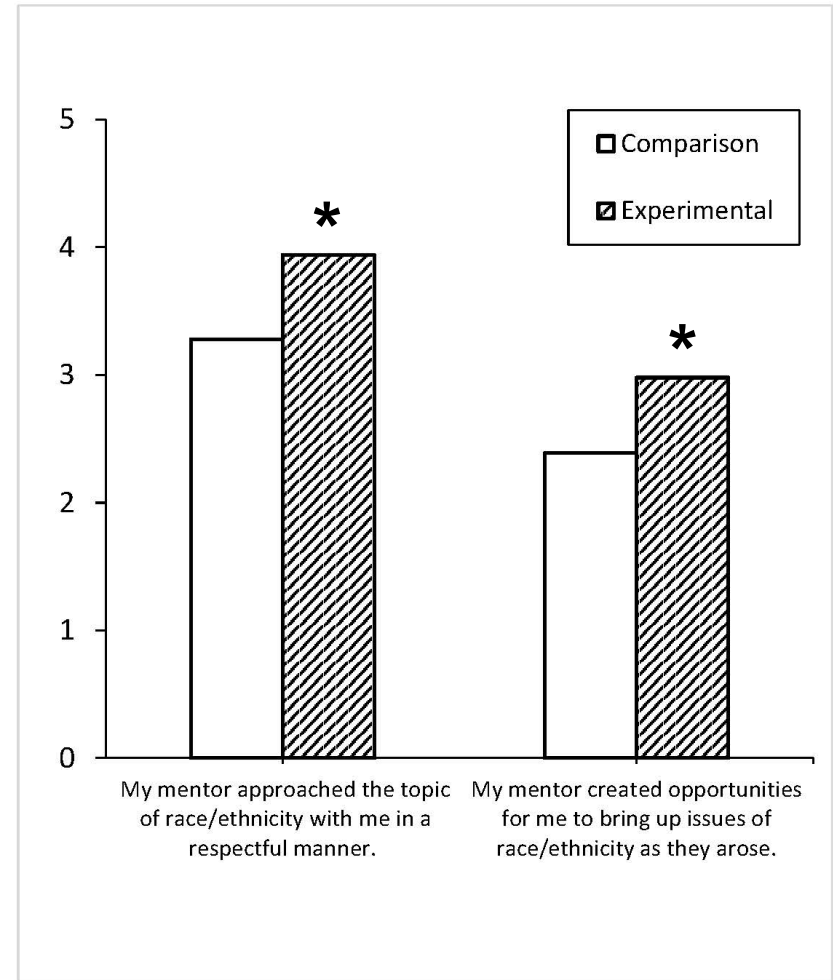
# A Randomized Controlled Trial of an Intervention to Increase Cultural Diversity Awareness of Research Mentors of Undergraduate Students

(Byars-Winston, Rogers, Thayer-Hart, Black, Branchaw, Pfund et al., *Sci Adv*, 2023)

\*Mentors in experimental group had higher endorsement of CDA Attitude item “*My racial/ethnic identity is relevant to my research mentoring relationships*” than control group

\*Mentees paired with mentors in experimental group rated their mentors **CDA Behaviors** higher at respectfully broaching and creating opportunities to address race/ethnicity matters

(NIGMS Grant R01 # GM094573)





Mentees' ratings of mentors' behaviors by treatment group. Frequency of Cultural Diversity Awareness Behaviors: 1= never, 5= all.



**Education  
Research Article**

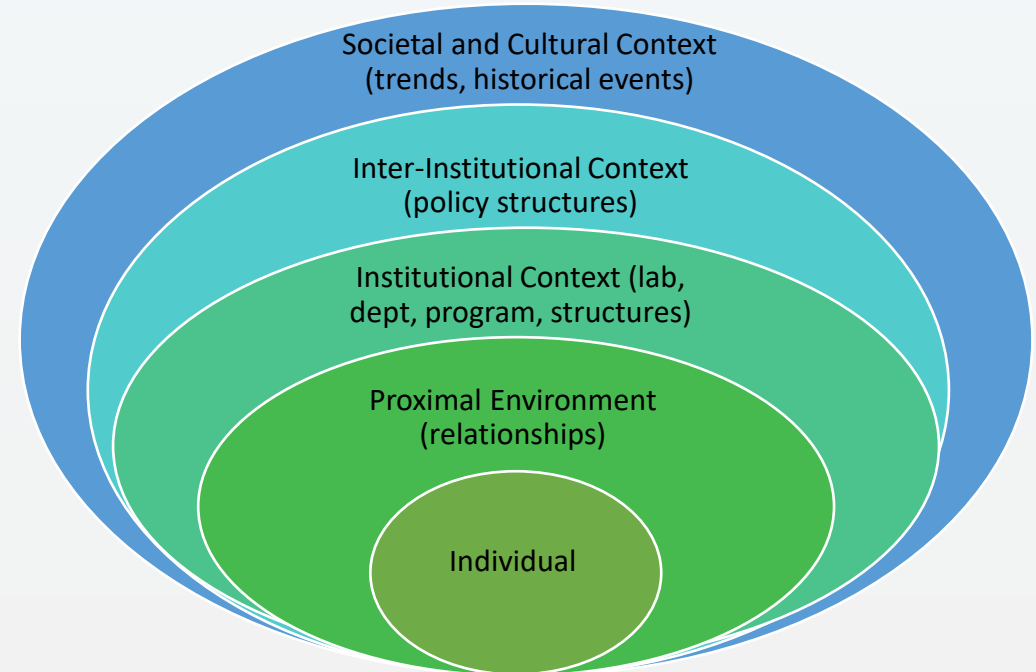
# A system-wide health sciences faculty mentor training program is associated with improved effective mentoring and institutional climate

JoAnn Trejo<sup>1,2</sup> , Deborah Wingard<sup>2,3</sup>, Virginia Hazen<sup>2</sup>, Alexandra Bortnick<sup>2</sup>, Karen Van Hoesen<sup>2,4</sup>, Angela Byars-Winston<sup>5</sup> , Christine Pfund<sup>6</sup> and Vivian Reznik<sup>2,3,7</sup>

Implemented mentorship education for 16/19 departments at UC San Diego Health Sciences, emphasizing culturally inclusive mentorship

~12hrs (2-day workshops) increased:

- Faculty mentors' perceptions of mentoring quality and meeting mentees' expectations
- Morale and perceived supportive environments for faculty from UR groups



# Summary

Effective Mentorship Is A  
Culturally Responsive  
Practice

One Strategy for  
Addressing Diversity  
Disconnect in Science

